A1

To achieve high integration of semiconductor devices, contrivances, such as miniscule patterning and multilayering of circuits, are under way. Among them is a technique for forming a multiplayer interconnection. To impart a multiplayer interconnection structure, an n^{th} wiring layer and an $(n+1)^{th}$ wiring layer are connected together by a conductor layer, and a thin film, called an interlayer insulator film, is formed in a region other than the conductor layer.

Please amend the paragraph beginning at line 28 of page 10 and ending at line 36 of page 10 as follows:

A2

According to the results of analysis in FIG. 9, the horizontal axis represents the position in the depth direction of the sample, while the vertical axis represents the number of Cu ions etc. in a unit volume. From FIG. 9, it is seen that "Cu is present in the surface of the WCN film or halfway in the surface, but stops at a certain depth, and does not exist at a depth corresponding to the Si substrate." This outcome demonstrates that Cu does not diffuse into the Si substrate, and the barrier properties of the WCN film are high.

IN THE CLAIMS:

Please amend claims 1-5, and add new claim 14, as follows:

A3

1. (Amended) A semiconductor device comprising:

an insulator film formed on a substrate;

a wiring layer of copper formed proximate the insulator film; and

a crystalline film containing tungsten, carbon, and nitrogen for preventing copper diffusion from the wiring layer to the insulator film, the crystalline film arranged between the insulator film and the wiring film.

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